NORTHERN ONTARIO SCHOOL OF MEDICINE

JUNE 2016

NORTHERN HEALTH RESEARCH

THE SCOPE

Health Services Data

Francophone Health

Community-Based Research

Local Education Groups

Northern Ontario School of Medicine

École de médecine du Nord de l'Ontario

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WELCOME TO *THE SCOPE*

Scope **can be defined as: the range of one's perceptions, thoughts, or actions; the geographical or perceived area covered by a given activity; or, a viewing instrument such as a microscope or telescope. In most modern usages of the word scope, there is a unifying theme of examination or investigation.**

In this case, *Scope* includes all of these ideas. Research at the Northern Ontario School of Medicine (NOSM) is reflective of the School's mandate to be socially accountable to the diversity of Northern Ontario. As such, studies are being undertaken in a range of subjects including culturally appropriate care for Aboriginal peoples, new drug technologies, cancer screening methods, patient rehabilitation, lakewater quality, and so much more. Subjects being studied are as varied as the geographic area of NOSM's wider campus of Northern Ontario and as diverse as the researchers themselves: faculty members in the School's Human, Medical, and Clinical Sciences Divisions, residents, medical students, a broad range of health-professional learners, and collaborators.

Although this publication cannot provide the full scope of exciting research happening across Northern Ontario, we hope it provides a glimpse into some of the work being done with a view of improving the health of Northern Ontarians and beyond.

The Scope Research Newsletter of the Northern Ontario School of Medicine

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WELCOME TO *THE SCOPE*

A Message from Dr. Penny Moody-Corbett Associate Dean of Research


Dr. Penny Moody-Corbett

This year, we're hosting three very exciting events in Sault Ste. Marie, all specifically regarding research: the International conference on Community Engaged Medical Education in the North (ICEMEN) 2016; the 11th annual Northern Health Research Conference (NHRC); and the Indigenous Research Gathering. Although research is the obvious thread that ties these events together, it occurred to me that it's a bit more specialized than that.

From my perspective, one of the things that binds these events together is their focus on research that is set out to improve the lives of people who may be in a position of vulnerability. For ICEMEN 2016, one of the main driving forces is investigating research, education, and service that helps rural and remote communities—communities that have historically had poorer health outcomes than their more urban counterparts, and that have reported being ignored or marginalized in the past. For NHRC, the research presented specifically provides a forum for our local research community to showcase their work on topics from bench to bedside to community. And lastly, the Indigenous Research Gathering looks to build positive and respectful relationships between Indigenous communities and researchers (including those who are Indigenous themselves), and plan a new and positive path forward.

In the past, we have not always heard the voices of those who are ill or injured, rural and remote, or in marginalized populations. It gives me great pleasure that these events gather great minds locally in Northern Ontario and around the world to discuss how we can improve healthy equity, and ensure that people and communities around the world have a voice in their health and care.

For those of you who are reading this at ICEMEN 2016, the Northern Health Research Conference, or the Indigenous Research Gathering—thank you sincerely for joining us, and taking part in these important conversations that look to better health, research, and education systems locally, and around the world. You'll find that many of the stories in the pages that follow may seem familiar. That's because many of the projects profiled in this issue of *The Scope* are those that will be presented at ICEMEN 2016, NHRC, and/or the Indigenous Research Gathering. There is so much to see and do throughout the week that we hope these stories give you a better sense of the types of research and narratives you will hear, or allow you to learn more about sessions that you may not have been able to attend.

For those of you unable to attend ICEMEN 2016, a report will be published that shares the learning, highlights, and education that took place so that you can hear about the types of research taking place around the world. Should any of the research inspire you or relate to your own areas of expertise, we invite you to make connections with your international colleagues and support each other in advancing health education and research across the globe.

Regardless of whether or not you were able to participate in ICEMEN 2016, the Northern Health Research Conference, or the Indigenous Research Gathering, please accept my sincere thanks for the health and education research that you are doing. People and communities around the world are grateful to your dedication to their wellbeing. Keep up the good work!

THE BIG PICTURE

PSI Visiting Scholar Discusses the Power of Big Data

According to evidence cited by Dr. Frank Sullivan, NOSM's Physicians' Services Incorporated (PSI) Visiting Scholar, family physicians have three unanswered questions for every two consultations with patients—a fact that often worries non-physicians. And, what's perhaps more concerning is that, at times when the physician consults the literature to find the answer to these questions, they find that there isn't a known answer.

It's this very dilemma that got Sullivan interested in health services research. In 2005, Sullivan saw a patient with Bell's palsy in his family practice in Scotland. Not sure about the best way to treat his patient, Sullivan consulted the literature, only to come up empty handed. He decided to design a research study that would enable him to better help his patients and the thousands of others who may be in a similar position. They recruited over 500 patients from about 400 family practice clinics in Scotland and were able to conclusively prove that giving patients with Bell's palsy 50mg of the oral corticosteroid prednisolone once a day for 10 days significantly improved their outcomes.

"Family medicine is an extremely under-researched area of medicine," says Sullivan. "Physicians are often in a position where they must use a best guess about a patient's diagnosis or treatment. If family physicians could agree on how to use data from patients, we could determine which interventions are most helpful."

One of the ways that Sullivan is able to conduct these large studies is through the use of "atomic data"—big data that, in the words of Sir James MacKenzie, has the ability to "do for medicine what the Atomic Theory has done for chemistry." An example of a study that demonstrates the power of atomic data can be found in Sullivan's research on the early detection of lung cancer, which just recruited its 12,000th patient.

"We all know that the best way to prevent lung cancer is to stop smoking, but as physicians, that can't be the only tool in our tool chest," says Sullivan. "Approximately 80 percent of patients with lung cancer are diagnosed when they are beyond curative treatment. This study is investigating ways that we can diagnose cancer at an earlier stage so that it can be cured."

The purpose of this project is to identify patients at higher risk of lung cancer—those who smoke, those who have a family history of lung cancer, those who are exposed to higher levels of smoke or dust, and other indicators. The screening involves identifying higher risk patients and administering a blood test that identifies lung cancer at a much earlier stage.

PSI FOUNDATION

Sullivan is currently working with the University of Toronto as the director of the University of Toronto Practice Based Research Network (UTOPIAN). This research network is part of a primary-care research initiative known as Canadian Primary Care Sentinel Surveillance Network (CPCSSN). CPCSSN is the first pan-Canadian multi-disease electronic medical record surveillance system. The network is being used to securely collect and report on vital information from Canadians' health records to improve the way chronic diseases and neurologic conditions are managed.

The power of atomic data is one of the reasons that Sullivan is travelling to Northern Ontario. As this year's PSI Visiting Scholar, Sullivan will be travelling to the North to present at ICEMEN 2016 and discuss how big data can be used to answer questions that are difficult to answer in family practice. Among other things, Sullivan will be speaking about his research, and about how Northern Ontario physicians are able to get involved with CPCSSN.

"Research is a state of mind, rather than a specific set of procedures," says Sullivan. "Whenever physicians are working, they will automatically be generating questions, some of which would be great research studies. We have to organize in family practice to be able to answer those questions in a way that other specialties have done. I believe the way to do that is by gathering data from electronic medical records in a practice-based research network, so that we have the information we need to answer these important questions."

NOSM's PSI Visiting Scholar is Dr. Frank Sullivan, a Scottish family physician with a Ph.D. in health services research.

RESEARCH AS A CONDUIT TO RECONCILIATION

NOSM Faculty Builds Trust and Relationships through Research with Indigenous Communities

According to Dr. Sheila Cote-Meek, research has an important role to play in the reconciliation of Indigenous and non-Indigenous peoples. As a Professor of Human Sciences at NOSM and the Associate Vice President of Academic and Indigenous Programs at Laurentian University, she is actively involved in academic research that relates to the health of Indigenous communities in Canada.

"The Truth and Reconciliation Council's *Calls to Action* are about developing meaningful relationships, and I think research has a very important role to play in that," says Cote-Meek. "Really, both reconciliation and research are about building trust in the community, forming meaningful relationships, making sure you follow through on your promises, and being responsive to the community's needs."

Most recently, Cote-Meek undertook a community-based research project to investigate tobacco misuse among First Nations youth in four communities across the country. During this six-year project that is currently in the process of being submitted for publication, Cote-Meek worked collaboratively with these communities to ensure that the research being undertaken was truly collaborative in nature.

Cote-Meek and her colleagues set up community research teams that consisted of a paid community-based researcher, a youth member, an Elder, and a community lead, typically the health director in that community. These four individuals in each community were responsible for providing local oversight of the research project, based on the needs and context in their community.

The four community-based research teams were brought together once a year for training sessions that rotated from one community to the next. Each training session built on the previous, and dealt with data collection, data analysis, report writing, and other scholarly activities relating to health research.

One of the important aspects of this project was the community ownership and meaningful engagement in the research. According to Cote-Meek, some researchers consider community-based research to have an emphasis on community consultation, with the control of the project remaining with the main researcher. However, she feels that community-based research calls for the community to make the important decisions, especially regarding the research design, research questions, and methodology employed. She feels that the researcher's role is to be flexible and transparent, and to support the community in building capacity to be able to make those decisions.

There were many successes with the project—including meaningful collaboration with the community, development of trust and relationships, and positive feedback regarding the structure—but like any project, there were also lessons learned.

"One of the most important aspects of community-based research is to be sure that you allow time to establish meaningful relationships with the community," says Cote-Meek. "Often times, the agencies that are distributing research grants have their own timelines, and those don't always work with the community. Many First Nations are dealing with crises and other issues that can take precedence. It's not just the researcher who needs to be respectful of the time and needs of the community, but it's also something to which those who are distributing the grants need to be mindful."

Dr. Sheila Cote-Meek is Anishnaabe-Kwe from the Teme-Augama Anishnabai. She is author of *Colonized Classrooms: Racism, trauma and resistance in post-secondary education.*

THE CLEAR NEED

Improving Access to Francophone Health Services

For Dr. Alain Gauthier and Patrick Timony—two Francophones who grew up in Northern Ontario—the need for Francophone physicians in the North has always been clear. “Growing up in Noelville, I always knew there was a need for French services, but it didn’t even seem like an option,” says Timony, Research Associate at the Centre for Rural and Northern Health (CRaNHR) at Laurentian University. “In my rural community, if services were available at all, they were available in English. I grew up hearing tales around the kitchen table that started, ‘You’ll never guess what happened to me at the hospital today…’”

In 2012, the opportunity arose for the two researchers to investigate French-language health services in Northern Ontario. Having personally experienced the challenges of receiving care in their mother tongue in the North, they jumped at the opportunity to investigate the important issue.

First, Gauthier and Timony investigated the question of access: Do Francophones in Northern Ontario have access to health services in their language? Based on anecdotal experience, it might be easy to hypothesize that there aren’t enough physicians offering services in French to meet the need. What Gauthier and Timony found was a little bit surprising—at first.

“Approximately five percent of the provincial population identify French as their first official language, whereas approximately 15 percent of family physicians practising in the province indicate that they are able to conduct their practice in French,” says Gauthier, NOSM Associate Professor in Human Sciences and Investigator with the Centre for Rural and Northern Health Research (CRaNHR). “You’d think that there are actually more physicians than required for the population of Francophones. But in reality, access to French-speaking physicians was not an issue of quantity, but rather, of maldistribution.”

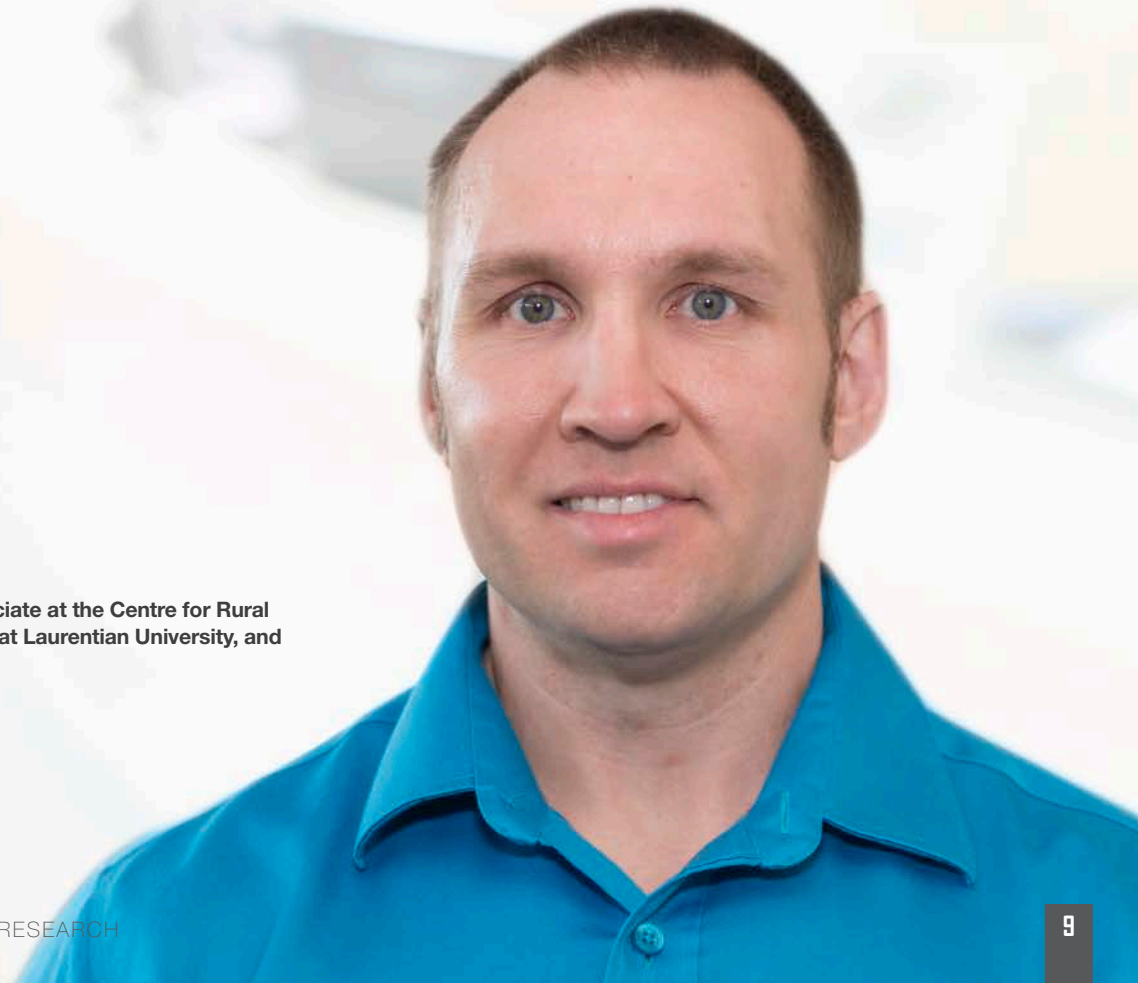
Dr. Alain Gauthier, NOSM Associate Professor in Human Sciences, Investigator with the Centre for Rural and Northern Health Research, and Associate Professor in the School of Human Kinetics at Laurentian University.

Gauthier and Timony's research has shown an inverse trend: There are more French-speaking physicians practising in areas that are sparsely populated with French people. Although approximately five percent of the provincial population speaks French as their mother tongue, Francophones account for nearly 25 percent of the population in Northeastern Ontario—meaning that many Northern Ontario communities that are densely populated by Francophones have an obvious need for French-speaking health services but such areas are at greatest risk of maldistribution of such services.

"We know that practising in rural and Northern communities leads to a larger scope of practise, but we hypothesize that this may be even more true with French-speaking physicians," says Timony. "Other physicians may be able to refer patients out and share the load, whereas French-speaking physicians may not have the same opportunity, so they may have to provide even more services than their non-French-speaking counterparts." In fact, the researchers have found that French-speaking physicians practising in areas densely populated by Francophones work more hours and see more patients than their non-French-speaking counterparts.

Gauthier and Timony are currently collaborating with NOSM's Francophone Affairs and Continuing Education and Professional Development (CEPD) Units to develop an educational program that will be available to both French and non-French-speaking physicians in order to help improve their practise and better serve their patients. The program will involve surveying both physicians and their patients, and addressing the needs identified by both through physician education.

"Our research is driven by our interest in improving the services rendered to French-speaking people in rural and Northern Ontario," says Gauthier. "By finding out more about what physicians do and what they would like help with, we can further support them in providing services to French-speaking patients."



Patrick Timony, Research Associate at the Centre for Rural and Northern Health (CRaNHR) at Laurentian University, and Ph.D. candidate.

Dr. Naana Jumah is a NOSM Assistant Professor in Clinical Sciences at NOSM, and an obstetrician and gynecologist at the Thunder Bay Regional Health Sciences Centre.

PAVING THE PATHWAY

Establishing Rural and Remote Maternity Services in Northwestern Ontario

As one of two tertiary hospitals in Northern Ontario, many patients are referred to Thunder Bay from other areas of Northwestern Ontario for care. One patient demographic that is often referred to Dr. Naana Jumah, NOSM Assistant Professor in Clinical Sciences and obstetrician in Thunder Bay, is women dealing with substance use during pregnancy.

"Many of my patients have substance use issues and many of my patients are First Nations women," says Jumah. "Often times, these women have other children at home on reserve, and have to leave their home and families to go to an unfamiliar place to have their baby. More often than not, they are not able to bring anyone to accompany them for the birth. They fly to Thunder Bay, deliver, and fly back home. As you can imagine, this can be a horribly traumatic experience, when it should be something beautiful, both for the woman, her family, and her community."

A few years ago, Jumah and her colleagues decided to begin investigating how to best support the management of substance use during pregnancy in rural areas. First, she completed an environmental scan of health and social services that are available to pregnant and parenting women in Northwestern Ontario. The survey went out across the region, and focus groups and key informant interviews were also conducted. Jumah hoped to understand the current state of the services provided to her patients, which would allow her to design a strategy to effectively address poor experiences in the future.

"What we found was that there are lots of resources available in communities, but they're not always properly funded, nor do they have the appropriate human resources," says Jumah. "What's lacking is more clearly defined communication when women make transitions into and out of their communities. Not only this, but there needs to be more support generally for these women. They need places where they know they can go to access services."

Jumah found that the regional service providers know their communities so well that they're able to cobble services together to do as much as they can for the women in their community. The efforts of the community were very positive. However, the communities also expressed that they were overwhelmed by the magnitude of the growing need, while the insufficient base of resources continues to remain static.

Jumah's findings lend support to the groundbreaking work done in this area by the Shibogama First Nations Health Authority. The two are now working together to develop an integrated care pathway for women with substance use issues who are coming from reserve. The hope is that this care pathway will help them navigate their pregnancies and improve follow up for the women and their babies after delivery.

"It's all about the women, and making their journey through pregnancy and parenting better," says Jumah. "I hope that in the future, birthing is brought closer to home so that women in rural and remote communities are able to have power back over their health and the birth of their children, and experience joy rather than fear when bringing a child into the world."

Dr. David Allen, NOSM's Postgraduate Education Evidence-Based Medicine Coordinator

ON THE UPTAKE

Research Demonstrates Impact of Continuing Education on the Practice of EBM

Evidence-based medicine (EBM)—which uses research at the bedside to inform clinical decisions—has continued to evolve since it first appeared in the literature in the early 1990s.[1] As the discipline has grown, so too have questions from faculty about the best ways to practise and teach EBM.

A few years ago, Dr. David Allen, NOSM's Postgraduate Education Evidence-Based Medicine Coordinator began investigating this very question. After being asked by his peers to provide education on the topic, Allen began researching optimal ways to teach clinical faculty about EBM.

First, Allen and his colleagues tried offering online modules and telephone-based journal clubs to NOSM's vastly distributed faculty. According to Allen, it quickly became apparent that this method was not having the desired impact. The content was revised to be offered as a workshop.

Now, Allen travels the North to offer education to NOSM's faculty, who are based in more than 90 communities across NOSM's wider campus of Northern Ontario. The travelling workshop makes it easier and more engaging for clinical teachers, who are able to attend the workshop either in their town or in a neighbouring community. To assess the workshop's efficacy, the participants were surveyed immediately after the workshop, then again six months later. In addition, follow-up interviews were conducted to evaluate whether or not the education was having a long-term impact on participants.

"Traditionally, EBM has revolved around critical appraisal of journal articles and deep searches for information in PubMED and other locations," says Allen. "But what we found is that practising doctors aren't really interested in that—it's not what their needs are. They want help doing quick searches at the bedside to inform patient care."

After analyzing the surveys and data from the follow up interviews, Allen and his colleagues found that the sessions were having a lasting impact on the participants' practice. Excitingly, they found that half of the workshop participants were still using the resources they learned about in the workshop—including BMJ Evidence Updates, the Trip Database, and the PICO model—six months to one year after attending the workshop. That is very surprising—according to Allen, a 50 percent uptake rate in continuing education is rare.

"I believe that if we can get clinicians comfortable practising evidence-based medicine, they will also feel more comfortable teaching it," says Allen. "The holy grail of EBM is being able to prove that it impacts patient care—that because of a focus on evidence, our patients have better outcomes. Although no one has been able to do that yet, this is one of the first studies that demonstrates a change in behaviour towards long-term adoption of EBM. We're hopeful this will lead to the ability to assess whether or not our patients are better off as a result."

1. Sur, R. L., & Dahm, P. (2011). History of evidence-based medicine. Indian Journal of Urology : IJU : Journal of the Urological Society of India, 27(4), 487–489.

DOING THE LEG WORK

NOSM's Local Education Group in Sault Ste. Marie Supports Local Scholarly Activity

When working within a distributed model of medical education, it's important that physicians feel academically supported in their training of future health professionals, regardless of their geography. This was one of a few motivations for establishing Local Education Groups (LEGs), administered through the Northern Ontario Academic Medical Association (NOAMA). LEGs are made up of groups of physician clinical teachers who typically share geography, and at times, an area of specialty. LEGs provide faculty members with the ability to have a say in their own professional development, have opportunities to expand their involvement in research, and make decisions about how the clinical competent of a student's education is delivered in their context.

The structure and make up of each LEG is different—open to the discretion of local members who make decisions about the best approach for continuing education and research for their community. One of the many successful LEGs in Northern Ontario can be found in Sault Ste. Marie. Officially titled the Sault Ste. Marie Academic Medical Association (SSMAMA), this LEG was established in 2012 and is funded by the Physician Clinical Teacher's Association (PCTA). SSMAMA is responsible for supporting faculty development, research, academic programming, and clinical teaching in the Algoma District. The purpose of the LEG is to provide physician clinical faculty in the region with an organizational structure to address the challenges of balancing academic and clinical demands.

"What makes our LEG unique compared to others in Northern Ontario is that we are multidisciplinary," says Dr. Edward Hirvi, NOSM Assistant Professor of Family Medicine in Sault Ste. Marie and local president of the SSMAMA. "All of the clinical faculty in the Algoma District—just over 100 members—belong to our LEG. This has allowed us to maximize our support by pooling larger amounts of funding to support clinicians who have an interest in research that is important to our faculty."

Since its inception in 2012, SSMAMA has awarded more than $270,000 in grants for scholarly research. Not only this, but they are also in the process of opening a centralized research office that will provide their members with administrative and research support for their projects.

"Many of our members require additional support from research assistants and coordinators," says Hirvi. "We hope that doing so will further support research in our community, while also bringing together health-care partners and researchers within the city to facilitate collaborative projects. All of this will better enable us to deliver a research program that addresses the needs of our community."

To learn more about SSMAMA, visit ssmama.ca.

PATIENT ENGAGEMENT THROUGH THE PORTAL

NOSM LEG Lead and Faculty Member Investigates Electronic Medical Records

As an engaged clinician himself, Dr. Edward Hirvi is one of the many faculty members in the Sault Ste. Marie Local Education Group (LEG) who is conducting scholarly research in the pursuit of better patient care. Specifically, his project involves the introduction of a portal system introduced at the Sault Ste. Marie Group Health Centre (ghc.on.ca). The portal system allows patients to log in and access their medical records, including lab results, diagnostic imaging, and other pertinent medical information. It also acts to facilitate communication between the patient and the physician through a secure messaging system linked to their chart.

"When I see a patient and order an x-ray, for example, I am able to forward the results of the x-ray to the patient as soon as it becomes available to me," explains Hirvi. "The patient is then able to log in to their account and view the results, as well as my notes and comments."

The purpose for creating a portal—which, though novel in Sault Ste. Marie has been trialed in other areas—is to empower patients to feel engaged in their care. Specifically, this initial study investigates the reasons for patients signing up for a patient portal, and analyzes who is using the system. Does giving patients knowledge and information change the relationship of how care is delivered?

"The feedback on this project so far has been very positive," says Hirvi. "It has allowed patients easier access to our office in terms of questions they might have regarding their medical care or a new symptom. It has also facilitated follow-up of patients after their visit to the office. The portal certainly provides expedited access to test results, and at times can even save patients an office visit. They report that they feel more informed about their medical care."

In addition to the portal system, Hirvi can see future applications for this project. Beyond investigating whether or not patients use a portal system, he hopes to investigate whether or not the use of that system impacts health decisions.

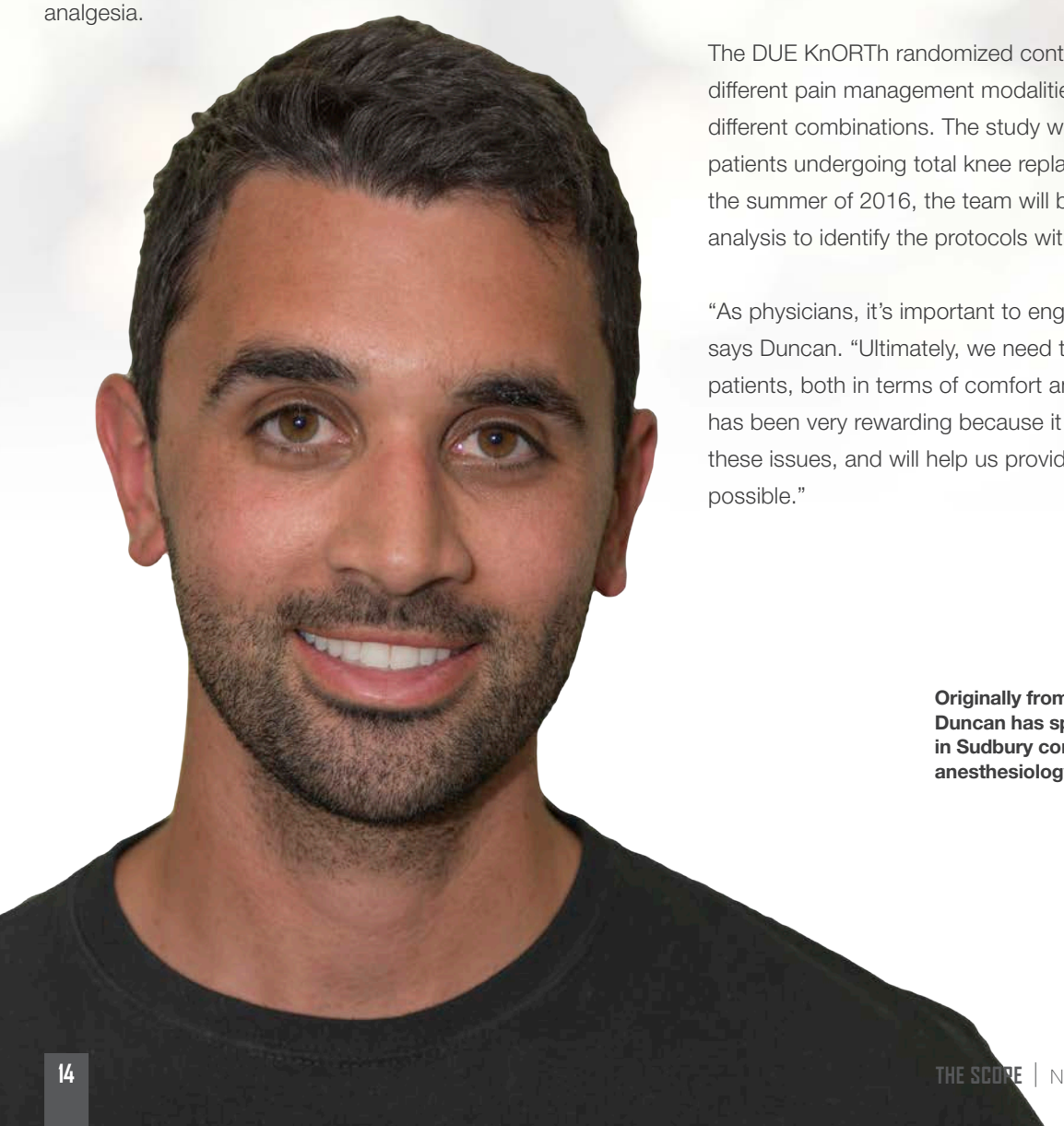
"This is future work, but next I'd like to look at whether or not increased access to medical records through the portal increases patient engagement and has an impact on health outcomes," Hirvi explains. "For example, does having access to results of a blood sugar test impact blood sugar control? Ultimately, we plan to continue to look at how patients use this system, how it affects their relationship with their physician, and, finally, how they feel about their care."

TAKING PAINS

NOSM Resident Investigates Best Pain Management in Knee Replacements

With knees being the largest, most complex joint in the body—and a system under great stress—it's no wonder that knee replacement surgery is so common. Dr. Ken Duncan, a NOSM third-year anesthesiology resident based at Health Sciences North (HSN) in Sudbury is working with his colleagues in the Anesthesia and General Surgery departments to investigate the best way to support patients going through this painful surgery.

Under the acronym DUE KnORTh—Discharge Up and Early following Knee Replacement: an Orthopedic Regional Technique study—the team is investigating the optimal perioperative interventions to provide the best post-operative analgesia.



As one might imagine, there are many ways in which the surgeon and anesthesiologist can work together to anesthetize a patient going through a total knee replacement. Currently at HSN, the team uses a combination of a spinal anesthetic, which provides freezing, and morphine injected around the nerves. But there are other strategies—for example, a femoral nerve block that involves freezing injected into the groin, or local anesthetic that infiltrates the tissues around the knee joint during and after operation.

"First and foremost, the purpose of this study is to identify which interventions enable patients to comfortably and safely mobilize after surgery and to facilitate a rapid discharge home," says Duncan. "Of course, our motivation is to support the patient, but we're also hoping this might have financial benefits for the health-care system, too."

The DUE KnORTh randomized controlled trial compares five different pain management modalities against each other in different combinations. The study will involve more than 100 patients undergoing total knee replacements at HSN. Over the summer of 2016, the team will begin preliminary data analysis to identify the protocols with the best outcomes.

"As physicians, it's important to engage in scholarly research," says Duncan. "Ultimately, we need to know what's best for patients, both in terms of comfort and recovery. This study has been very rewarding because it addresses both of these issues, and will help us provide the best patient care possible."

Originally from Cobourg, Ontario, Dr. Ken Duncan has spent the last three years in Sudbury completing his residency in anesthesiology.

COVERING LOTS OF GROUND

Establishing Community-Based Emergency Care in Fly-In Northern Communities

North of Thunder Bay, there are approximately 30 remote, fly-in Indigenous communities, with a combined population of approximately 25,000 people. In many of these communities, there are no 911 or paramedic services. When someone in the community is sick or injured, formal care doesn't begin until the ailing individual arrives at the nursing station—meaning that the task of transporting this individual there quickly and safely often falls to a friend or loved one.

After working as a resident in Sioux Lookout for six months, Dr. David VanderBurgh, now a NOSM Assistant Professor and ER doctor at the Thunder Bay Regional Health Sciences Centre, saw the immense need of many communities in the North when it came to access to emergency care. At the request of local community members and Health Director at Sachigo Lake First Nation, Jackson Beardy, VanderBurgh and his colleague Dr. Aaron Orkin developed two training courses (one in 2009 and another in 2012) in Sachigo Lake First Nation to build capacity to respond to issues in the community when someone is sick or injured. "First Nation communities are crying out for help for better... emergency care, as nursing care is restricted to Nursing stations," says Jackson Beardy.

"I think the courses have had an impact in helping people feel more comfortable in a stressful situation when someone is sick or injured," says VanderBurgh. "One of the strong messages that we heard while we were there was that the folks in Sachigo Lake have a great desire to learn, and are interested in having more programming that helps increase access to care."

VanderBurgh and his colleagues are hoping to take the successes of the programs in Sachigo Lake First Nation and bring them to other remote Northern communities. "We're working with the Windigo Tribal Council of seven communities (of which Sachigo Lake First Nation is one) to develop a model that meets their specific needs," says VanderBurgh. "This sort of strategic planning and partnership building with each community allows us to ensure that we're able to address the priority issues the communities are facing."

VanderBurgh, Orkin, and a team of almost 20 others are completing a systematic review to look at all global programs where community members are providing pre-hospital emergency care in underserviced communities to discover the health impacts of such services. Plus, the team is conducting an epidemiology study in northwestern Ontario. They will analyze medical transportation data to learn more about the reasons and risk factors when someone needs to be evaluated from these communities.

"This research is community-based, and community driven by our Indigenous partners and communities, and I am glad to have seen an impact so far," says VanderBurgh. "The challenge is that we are trying to affect change in a system in which it is incredibly hard to affect change. To really see the long-term benefits of this and other remote programs, there needs to be transformative change to support health access in the North."

More information about VanderBurgh's research can be found at nosm.ca/cbec.

Recently awarded NOSM's Clinical Teacher Award, Dr. VanderBurgh and his colleagues are working collaboratively with local health providers, Sioux Lookout First Nations Health Authority (SLFNHA), and Nishnawbe Aski Nation (NAN) to discuss a path forward for emergency care in the North.

Research that Matters to You

NOSM's research focuses on questions of importance for the health of the people and communities of Northern Ontario. NOSM's health research is taking place across the North—in laboratories, hospitals, communities, and clinics in order to ensure that your health needs are addressed.

NOSM's research relates to you, and focuses on things such as:

Chronic Disease

Cancer | Lung Disorders
Reproductive Health | Diabetes
Care of the Elderly

Health-Care Delivery

Northern and Rural Health
Social Determinants of Health
Interprofessional Care

Our Unique Environment

Occupational Health
Air Quality
Distributed Education
Blue-Green Algae

Mental Health

Addictions | Depression
Improving Care | Stress
Workplace Wellness

And Much More...

In the last decade, NOSM and its partners have awarded 128 medical student research awards worth more than $777,000 in order to encourage students to pursue health research for the North.

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